

Lesson 2.2

Solving One-Step Equations

A veterinarian needs to know the weight of Zoe's dog to give him the correct amount of medicine. The dog is scared, and also sick, so it will not sit still on the scale. Zoe steps on the scale and her weight is 137 pounds. Then Zoe holds her dog while standing on the scale, and their total weight is 171 pounds.

Solving Equations by Adding or Subtracting Examples

1. Use the addition property of equality to solve $g - 25 = 113$

$$\begin{array}{r} g - 25 = 113 \\ +25 \quad +25 \\ \hline g = 138 \end{array}$$

2. Explain how you would solve $-3 = j - 87$

Addition prop. of equality w/ 87

3. Use the subtraction property of equality to solve $27 + k = 30$

$$\begin{array}{r} -27 \quad -27 \\ \hline k = 3 \end{array}$$

4. Ann says that you could also solve $27 + k = 30$ by using the Addition Property of Equality. Explain Ann's reasoning.

5. Use the subtraction property of equality to solve $c + 22 = 54$

6. In tennis, the Grand Slam tournaments are the four most prestigious annual events. At one point in his career, Roger Federer had won three more Grand Slam singles titles than Rafael Nadal. If at that time Roger Federer held the record for the most Grand Slam singles titles won with 17, how many Grand Slam singles titles had Rafael Nadal won?

$$\begin{array}{r} x + 3 = 17 \\ -3 \quad -3 \\ \hline x = 14 \end{array}$$

7. The Empire State Building and the Chrysler Building are two of the tallest buildings in New York City. The Empire State Building is 204 feet taller than the Chrysler Building. If the Empire State Building is 1250 feet tall, write and solve an equation to find the height of the Chrysler Building.

Do first lesson check here